KODAK PHOTO NOTES

Formerly *Kodak Handbook-Notebook News*

WINTER • 1948-1949

Exposing Snow Scenes on Kodachrome Film

SNOW SCENES make up a large part of the photographic fare these days—at least for those of us who have the debatable privilege of living in the skiing, shoveling, and shivering belt. A peek at a representative day's processing at Kodachrome Processing Laboratories in the northern states indicates that the most frequent problem is exposure. Letters from photographers who are troubled with snow-scene exposure on Kodachrome Film indicate a tendency toward *under*exposure when an exposure meter is used, *over*exposure when a meter is not used.

Without a Meter: Most of the photographers who do not use an exposure meter are guided by exposure tables and calculators, such as the Snapshot Kodaguide. The important point to remember when using these guides and tables is that a snow scene comes under the "Light Subject" classification. *(Continued on page 2)*

Exposing Snow Scenes— *(Continued from page 1)*

The booklet, "Wintertime Picture Taking" (C4), says, "Use these rules as guides: For a general snow scene without people in the foreground on a clear, sunny day, exposures for Kodachrome Film should not be less than 1/50 second at *f*/8, except when the snow is covered with a new glistening crust. Even then, only a back-lighted scene should call for an exposure as small as 1/50 second at *f*/11. You will be about right if you shoot side-lighted snow scenes at 1/50 second at *f*/8, and open up a half stop more if near-by people are included."

With Reflected-Light Meters: Don't slavishly follow an unusually high reading unless it seems reasonable for the effect you want. Remember that snow in bright sunlight reflects a tremendous amount of light, and if a reading is taken chiefly from the snow, it may indicate an exposure so short that important parts of the scene, such as people, houses, and other objects, will suffer underexposure. Even the snow may be gray. Most meter manufacturers recommend that the reading for such scenes be taken close to the most important subject.

To get the best snow pictures, always choose a sunny day. Without crisp shadows to bring out texture and form, snow scenes are flat, dull, and lifeless. Side lighting or back lighting is best; front lighting (with the sun behind you) robs the scene of many of those important shadows.

"Warming Up" Snow Scenes: Shadows on snow *are* blue, at least when the sky is blue. If you prefer less blue in the shadows, use a Kodachrome Haze Filter or Kodak Color Correction Filter CC13, CC14, or CC15 over the camera lens. The filters are mentioned here in the order of increasingly warm results obtained with them. No exposure increase is needed when using the Kodachrome Haze Filter or the CC13 Filter. The CC14 Filter requires ¼ to ½ stop more exposure than is required without a filter; the CC15 Filter requires ½ to ¾ stop more exposure.

LABEL YOUR NOTEBOOKS

HERE's a tip for note takers and literature collectors who need more than one *Kodak Photographic Notebook* for keeping information in order. To aid in identifying the various *Notebooks*, type or print the major subject classifications of each *Notebook* on a card about one inch square and stick the card on the backbone of the *Notebook*, at the top. To make the label stick permanently, use Kodak Rapid Mounting Cement, applying a thin film of cement to both the *Notebook* and the back of the card. Few other adhesives will stick.

Try "Night-Club" Photography at Your Next Party

With the aid of your camera and flash equipment, and the quick-finishing procedure given here, you can easily lend a touch of night-club atmosphere (without cover charge) the next time you have the gang in for a party.

Folders can be made up, suitable for the occasion, in which the finished prints can be mounted and presented to the guests as mementos of the affair. If the party schedule permits, the pictures in their mounts can be used as place markers.

The quick-finishing procedure suggested here is not, of course, limited to party and night-club photography. Rapid processing is well known to news photographers, and these suggestions are applicable whenever you must race the clock to get out a finished photograph.

Film: Either panchromatic or orthochromatic film can be used. The latter has the advantage of permitting tray development under a red safelight, such as is provided by the Kodak Safelight Filter, Wratten Series 2. Orthochromatic films are also preferred by many for flesh-tone rendering in flash photography. Recommended sheet films are Kodak Super Ortho-Press, Kodak Super Panchro-Press, Type B, and Kodak Super-XX Films. Very high-speed materials, such as Kodak Tri-X Panchromatic Film, are less suitable because they require longer development time and are usually grainier. For roll-film cameras, either Kodak Plus-X or Kodak Verichrome Film can be used.

Flash Exposure: Use the handy Flash Kodaguide for calculating exposure. A typical synchronized-flash exposure is 1/100 second at *f*/8 at a lamp-to-subject distance of eight feet, using a Photoflash Lamp No. 5 and either Kodak Verichrome or Kodak Plus-X Film.

Paper: Make enlargements on Kodak Resisto Rapid N Paper, contact prints on Kodak Resisto N Paper. These papers are coated on a water-resistant paper base which allows rapid processing and drying. *Note: When prints are made by such rapid processing methods, maximum permanence of the print image cannot be expected.*

Procedure

1. Film development—use Kodak Dektol Developer, diluted 1:1, or Kodak Developer D-72 (1:1). Develop in a tray for about 2 minutes at 68°F with continuous agitation, or for shorter times at higher temperatures. (*Continued on page 7*)

WHAT'S NEW?

a glimpse of some recent Kodak products for better photography

Dealers Again Have Kodak Retina Cameras

IMMENSELY popular before the war, the Kodak Retina I Camera, with Schneider-Xenar Lens, 50mm *f*/3.5; and the Kodak Retina II Camera, featuring a coupled range finder and a Schneider-Xenon Lens, 50mm *f*/2, are again back on dealers' shelves in this country.

The lenses on both the Retina I and Retina II Cameras are surface-treated. Some of the other outstanding features of both models are: Compur-Rapid Shutter with speeds to 1/500 second, automatic double-exposure prevention, plunger-type body shutter release, and black leather covering with satin-finish-chromium trim. Both cameras use 35mm K135 roll film, 20 or 36 exposures.

The coupled range finder on the Kodak Retina II Camera is of the superimposed-image type, with one eyepiece serving both range finder and view finder.

Prices: Kodak Retina I Camera, $62.50 plus $10.16 tax; Kodak Retina II Camera, $170 plus $27.63 tax.

KODAK CINE EKTAR LENSES SET NEW STANDARDS FOR CINE LENSES; INCORPORATE UNIQUE DESIGN FEATURES

KODAK Cine Ektar Lenses are the finest lenses ever produced for 16mm or for 8mm motion-picture cameras. They are available in the following focal length and maximum aperture combinations: 15mm *f*/2.5, 25mm *f*/1.4, 25mm *f*/1.9, 40mm *f*/1.6, 63mm *f*/2.0, 102mm *f*/2.7, and 152mm *f*/4.0.

These lenses meet the highest standards of definition, and provide unmatched flatness of field. Even at widest apertures, performance is outstanding. Lumenized glass-air surfaces, blackened lens rims, corrugated mounts, and beveled flanges—all add up to superior internal design. External appearance and operating features such as the widely and evenly spaced aperture scale further demonstrate that these lenses merit the distinguished name *Ektar*.

Kodak Reflex II Camera Announced

FIVE new features send the Kodak Reflex II Camera even farther in front of the rest of the medium-price, twin-lens reflex-camera field. (1) The unique, Kodak Ektalite Field Lens under the ground glass increases over all ground-glass-image brilliance two and one half times—*ten* times at the corners. (2) Automatic film stop facilitates film advance without need for using the red window except for positioning the film for the first exposure.

(3) Flash Kodamatic Shutter has a new top speed of 1/300 second. (4) New Field Case with removable front allows a Kodak Flasholder to be attached while camera is in case. (5) With its new, smarter styling, the Kodak Reflex II Camera looks every inch the precision camera that it is.

No other two-lens reflex camera in the medium-price field offers all these features, plus the matched precision of *twin*, four-element, Lumenized Kodak Anastar Lenses, 80mm *f*/3.5; and the enduring protection afforded by a die cast, aluminum alloy body.

The Kodak Reflex II Camera takes Kodak No. 620 Film, 2¼ x 2¼-inch picture size.

Price, with Field Case and neck strap, $135 plus $19.91 tax.

NEW KODAK DARKROOM AIDS

Kodak Dektol Developer is now supplied in handy packets, each containing sufficient powdered chemicals to make 16 ounces of working solution. The packets are supplied three to a carton. Price per carton, 35 cents.

Kodak Microdol Developer is also available in packet form, especially desirable for those who develop films only occasionally. Two sealed, metal-foil packets, each containing sufficient powdered chemicals to make eight ounces of working solution, are supplied in a folding carton. Price per carton, 25 cents.

Kodak Darkroom Graduates have an extremely legible black index scale as well as a molded glass scale. Available in 4-, 8-, and 32-ounce sizes, the graduates are priced at 25 cents, 30 cents, and 75 cents, respectively.

Kodak Rubber Squeegees are again available with an improved 10-inch rubber blade that will not mark paper. The blade is welded to the rubber handle to make a one-piece unit that will not separate with use. Price, $2 plus $.33 tax.

The Kodak Stirring Paddle is a combination stirring rod and print paddle. It is made of yellow Tenite plastic and is 10 inches long. One end is shaped like a pestle, the other like a perforated shovel. The shovel end projects in an inclined plane to serve as a print paddle. Price, 35 cents.

All prices are subject to change without notice.

T-Numbers Explained

THE Lens Calibration Subcommittee of the Society of Motion Picture Engineers has proposed, for consideration by the American Standards Association as a motion picture standard, the calibrating of lenses by numbers which include a factor for the transmission of the lens. These numbers, termed T-numbers, are modified *f*-numbers.

In the *f*-system, the *f*-number is determined by dividing the focal length of the lens by the diameter of the lens aperture. Thus two lenses of the same focal length and set to the same *f*-number have the same lens opening, but may or may not transmit the same amount of light due to differences in the number of lens elements, presence or efficiency of lens coating, type of glass, amount of internal reflections, etc. The proposed T-system would eliminate this possible discrepancy among lenses by actually measuring the light transmission of finished lenses and marking lens openings by a T-number. By this procedure all lenses, regardless of constructional variations and focal length, would have equivalent transmissions when set to the same T-number.

The T-number is focal length divided by the diameter of an open circular hole which transmits the same amount of light as the lens does at the opening concerned. As some light is lost through reflection and absorption by the lens elements, the equivalent open hole is smaller than the effective diameter of the lens itself; therefore, the T-number is always higher than the *f*-number. Reflection losses are small in surface-treated lenses; therefore, the difference between T- and *f*-numbers is small, for example T2.1 and *f*/2.0, respectively, for a complex 50-mm surface-treated lens. The difference, expressed in exposure, is 10 per cent for equal T- and *f*-numbers—a small difference, even in color photography. The difference for less complex lenses is smaller, but for untreated complex lenses, it would be much larger.

While existing exposure recommendations can probably be applied to T-numbers, they apply specifically to *f*-numbers with an assumed average transmission. Depth-of-field computations are dependent on *f*-number. The T-number must be corrected for transmission factor or the computed depth of field will be too great.

It seems to the editors that the greatest need for T-numbers is past with still-camera lenses. It would have been desirable on complex untreated lenses. The almost universal production of surface-treated, high-grade camera lenses has made the use of *f*-numbers sufficiently precise for exposure purposes. There may be a good argument to calibrate some motion-picture lenses in T-numbers.

SILICONE TISSUES ARE GOOD FOR "CHEATERS," BUT NOT FOR SURFACE-TREATED LENSES

ALTHOUGH those new silicone-treated tissues are efficient for cleaning spectacle lenses, you should not use them for cleaning Kodak Lumenized lenses, or other surface-treated lenses.

The effectiveness of lens coating is due, in part, to the critically controlled thickness of the magnesium fluoride deposit—about four millionths of an inch on Kodak Lumenized lenses. When silicone-treated tissues are used, a thin film of silicone is deposited on the lens surface. This adds to the thickness of the original lens coating, changes its apparent color, and impairs its antireflection function.

Kodak Lens Cleaning Paper, a fine camel's-hair brush, or a soft, lintless cloth should be used for cleaning photographic lenses. Fingerprints, spots of oil, or other scum deposits can be removed with a drop of Kodak Lens Cleaner on the cleaning paper or cloth.

"Night-Club" Photography — *(Continued from page 3)*

The developer can be used full strength if slightly more contrast is desired.
Time required . . . . . *120 seconds*

2. Rinse in water or Kodak Stop Bath SB-1a. *Time required* . . . . . *15 seconds*

3. Fix for 2 minutes in Kodak Rapid Liquid Fixer with Hardener. The activity of this bath should be checked from time to time by means of the Kodak Testing Outfit for Stop Baths and Fixing Baths which tells in a second when the fixing bath has lost its activity and must be renewed. (To insure permanence, fix the negative for 3 to 5 minutes after prints are made.)
Time required . . . . . *120 seconds*

4. Rinse in running water. (If the negatives are to be saved, wash for 20 to 30 minutes after the prints have been made.) *Time required* . . . . . *60 seconds*

5. Enlarge from the wet film. Squeegee the film to remove droplets. Use a Glassless Negative Carrier or sandwich the negative between two pieces of Kodapak Sheet and roll out the air with a squeegee. *Time required* . . *45 seconds*

6. Develop the print in Kodak Dektol Developer (1:1) or Kodak Developer D-72 (1:1) at 68°F. *Time required* . . . . . *60 seconds*

7. Rinse print in running water. Time required . . . . . *5 seconds*

8. Fix in Kodak Rapid Liquid Fixer with Hardener. Use separate baths for prints and films. *Time required* . . . . . *60 seconds*

9. Wash in running water. *Time required* . . . . . *90 seconds*

10. Blot off surface water and dry under infrared lamp. *Time required* . . *25 seconds*

Total time—10 minutes

ARTICLES ON SPECIAL PHOTOGRAPHIC SUBJECTS

This list of free articles supplements the list which is included in the *Kodak Reference Handbook* and in the *Kodak Photographic Notebook*. Back issues of *Kodak Handbook-Notebook News* also contain the complete list. These articles will be sent on written request. You are invited to ask for those articles in which you are particularly interested.

Articles announced since Spring, 1948:

K 8—Notes on Building an Enlarger (8 pages)
D26—Editing Your Home Movies (8 pages)
H20—Kodak Chemical Processing Aids. Includes Kodak Anti-Calcium, Kodak Anti-Fog No. 1, Kodak Anti-Fog No. 2, Kodak Anti-Foam, Kodak Testing Outfit, Kodak Print Flattening Solution, Kodak Desensitizer, Kodak Photo-Flo (8 pages).

Articles of seasonal interest:

C 4—Wintertime Picture Taking (16 pages)

New Catalog:

D 2—Kodak Cine Ektar Lenses (8 pages)

Catalogs:

C28—Kodak Albums (6 pages)
C34—Kodak Materials for Print Coloring and Retouching (4 pages)
C19—Kodak Picture Taking Equipment (16 pages)
E41—Kodak Still Projection Equipment (6 pages)
E62—Kodak Materials and Equipment for Still Pictures in Color (6 pages)
K 1—Kodak Darkroom Equipment for Developing and Printing (16 pages)

A few back issues of the *Kodak Handbook-Notebook News* are available.

IS YOUR KODAK REFERENCE HANDBOOK UP TO DATE?

The most recent edition of the *Kodak Reference Handbook* includes the following sections with the copyright dates indicated: *Lenses*—1948, Third Edition; *Films*—1947, Fourth Edition; *Filters*—1944; *Color Films*—1948, Fourth Edition; *Papers*—1947, Fourth Edition; *Processing and Formulas*—1947, Fourth Edition; *Copying*—1947, Fourth Edition. You can bring your Handbook up to date by replacing individual outdated sections with the latest printings of Kodak Data Books on sale at Kodak dealers.

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